

**ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM**

Plant Abstract

Element Code: PDAST700P0

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE



ME: *Perityle saxicola* (Eastw.) Shinnery
COMMON NAME: Fish Creek rock daisy, Roosevelt Dam rockdaisy
SYNONYMS: *Laphamia saxicola* Eastwood
FAMILY: Compositae

AUTHOR, PLACE OF PUBLICATION: *Perityle saxicola* (Eastwood) L.H. Shinnery,
Southwestern Naturalist 4(4): 204-206. 1959. *Laphamia saxicola* Eastwood, Proc. Calif.
Acad. Sci. IV, 20(5): 159-160. 1931.

TYPE LOCALITY: United States of America. Arizona. Maricopa County near Roosevelt Dam
on the road to Fish Creek, Apache Trail, 22 May 1929.

TYPE SPECIMEN: HT: CAS-167470. A. Eastwood 17401, 22 May 1929. IT: CAS, DS, GH,
NY, POM, UC, US.

TAXONOMIC UNIQUENESS: A distinct species in a genus of about 25 species native to
southwestern U.S. and Mexico. USDA, PLANTS Database (2002), reports 35 species in the
genus *Perityle*. Lehr (1978) recognized 12 species of *Perityle* as occurring in Arizona. Genus
is "characterized by a high degree of endemism accentuated by a rapid rate of evolution in
part allowed (or promoted by) polyploid tendencies" (Fletcher 1978). *Perityle* and *Laphamia*
have had taxa transferred from one to the other for over 100 years.

DESCRIPTION: Slender, suffrutescent (woody base, herbaceous branches) perennial herb,
20-40 cm (8-16 in.) tall spreading to clumps about 30 cm (12 in) wide. Stems are finely
striate, brittle, branching near the caudex and in the upper portions. Leaves are mostly
opposite, 3.0-6.0 cm (1.4-2.4 in.) long, **highly dissected** into filiform lobes, sometimes
glandular, each segment 5-15 mm long. Petioles usually shorter than blades, narrowly
winged, minutely glandular. The inflorescence is densely glandular. The ray and disk
flowers are yellow; disks about 10 mm in diameter. Achenes are 2.8-3.2 mm long, oblong-
obconical to narrowly obconical, with conspicuous callous margins. The usually present
pappus has 1, sometimes 2 awns (Falk, Jenkins et al. 2001). See "Aids To Identification" for
discussion on pappus.

AIDS TO IDENTIFICATION: *P. saxicola* differs from other species in genus by its highly
dissected leaves and location. It may be sympatric with *Perityle gilensis* in part of its
suspected range. *P. gilensis* ssp. *gilensis* occurs downstream on the Salt River approximately

10 miles from the nearest *P. saxicola* population. *P. gilensis* ssp. *salensis* occurs along the Salt River approximately 35 air miles upstream of *P. saxicola*.

According to Mazzoni et al. (1982), "Eastwood placed this plant in the genus *Laphamia* because it lacks a pappus. Shinnery (1959) transferred the species to *Perityle* because he believed the differences between the two genera were arbitrary. The two genera are distinguished by the presence or absence of small pappus scales with or without awns."

ILLUSTRATIONS: Line drawing (Niles 1970:55).

Line drawing (USFWS).

Color photo of Isotype collection (*in* US Nat. Herb, accessed 12/12/2003, <http://rathbun.si.edu/botany/types/printImage.cfm?mupic=00124652.jpg>)

Color photo of Isotype collection (*in* NYBG, accessed 12/12/2003, http://scicun.nybg.org:8890/searchdb/owa/wwwcatalogrenz.detail_list)

Color photos of plant and habitat (USFS, *in* Falk, Jenkins et al. 2001)

TOTAL RANGE: Gila and Maricopa counties, Arizona. Near Tonto National Monument, Roosevelt Lake, and above Horse Camp Creek in the Sierra Ancha Mts. Not found at Fish Creek. Suspected throughout Superstition Mountains (Reichenbacher 1989) and at Tonto National Monument (several hundred plants) (Palmer 1994). Kearney and Peebles location is doubtful, and needs to be resurveyed and verified (Palmer 1994). Few known sites, all of which are within 5 miles of each other.

RANGE WITHIN ARIZONA: See "Total Range."

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Herbaceous perennial with a woody base stock.

PHENOLOGY: Flowers and sets seed from May to June.

BIOLOGY: Local conditions of drought/shade may affect morphology of individual plant, especially leaf size and degree of dissection. Substrate driven. Many species of *Perityle* are edaphically restricted and are local endemics (Palmer 1994). This species has very specific habitat requirements. Aphids are a common predator.

HABITAT: A narrow endemic with specific habitat requirements. It grows in very xeric habitat on very steep slopes, from cracks and crevices on cliff faces, large boulders and rocky outcrops in canyons and on buttes composed of Barnes conglomerate and Mescal limestone. Dripping Springs location is on quartzite.

ELEVATION: 2,025 - 3,800 ft. (618 - 1159 m). Falk, Jenkins et al. (2001), reports elevation range of 2,500 - 3,400 ft. (760 - 1035 m).

EXPOSURE: Very steep cliffs with generally east and northeast exposure. Slopes range from 50-100%.

SUBSTRATE: Complex geology of rock, consisting of Barnes conglomerate, Mescal limestone, and igneous material (quartzite).

PLANT COMMUNITY: Arizona Upland Subdivision of Sonoran Desertscrub. Dominant associated species include: *Bromus rubens* (red brome), *Cereus giganteus* (saguaro), *Dasyllirion wheeleri* (sotol), *Dudleya saxosa* ssp. *collomae* (stonecrop), *Encelia* sp. (brittle bush), *Fouquieria splendens* (ocotillo), *Heuchera* sp. (alumroot), *Mirabilis bigelovii* (four-o'clock), *Penstemon eatoni* (beard tongue), and *Simmondsia chinensis* (jojoba). (Mazzoni et al. 1982). Other plant species observed with taxon include: *Aloysia* sp., *Brickellia* sp., *Echeveria* sp., *Galium* sp., *Selaginella* sp., and *Stipa* sp.

POPULATION TRENDS: A narrow endemic, with few known localities. It is sporadic to common in Tonto National Monument, and sporadic near Roosevelt Dam. It occurs in the Sierra Ancha Mountains, and may occur throughout the Superstition Mountains. The type locality population just below Roosevelt Dam, consists of about 60 plants, while the plants at Tonto National Monument are "locally common." Reproductive success in 1982 appeared to be good.

SPECIES PROTECTION AND PRESERVATION

ENDANGERED SPECIES ACT STATUS: None (USDI, FWS 1996)
[C2 USDI, FWS 1985]
[3C USDI, FWS 1983]
[C1 USDI, FWS 1980]
[PTN-T USDI, FWS 1975]

STATE STATUS: None

OTHER STATUS: Forest Service Sensitive (USDA, FS Region 3 1999)
[Forest Service Sensitive (USDA, FS Region 3 1990)]

MANAGEMENT ISSUES: A narrow endemic with very specific habitat requirements. Threats are limited to major activities requiring blasting (i.e. dam, road and trail construction). Roosevelt Dam re-construction in the 1990s, may have impacted some plants, however, most plants occur higher up-slope, above construction activities.

CONSERVATION MEASURES TAKEN:

SUGGESTED PROJECTS: Distribution expected to extend throughout the Superstition Mountains, especially in southeast portion of range, south of Tonto National Monument. Additional surveys need to be conducted on distribution and possible range extension. Analysis of soil survey maps may aid in identification of potential habitat.

LAND MANAGEMENT/OWNERSHIP: NPS - Tonto National Monument; USFS - Tonto National Forest.

SOURCES OF FURTHER INFORMATION

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ADDITIONAL INFORMATION:

Chromosome number: N=17.

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